TEL. 8-8567

10S/6E-15D2

HORNKOHL LABORATORIES

CHEMICAL AND TESTING ENGINEERS

714 TRUXTUN AVENUE

BAKERSFIELD, CALIFORNIA

October 8, 1954

Laboratory No. ~~79499~~ 79500

Sample Water

Marked 9/25/54: Well #14

Received Sept. 29, 1954

Submitted by Mr. A. F. Peterson
Bakersfield, Calif.

* * * * * * * * * * *

IRRIGATION WATER ANALYSIS

CONSTITUENTS			PARTS PER MILLION	GRAINS PER GALLON	IRRIGATION WATER CLASSIFICATION
CARBONATES	(ALKALI)	(CO_3)	3.6	0.21	Fair-Good
BICARBONATES		(HCO_3)	170.8	9.99	Good
CHLORIDES	(SALT)	(Cl)	112.1	6.56	Good
SULPHATES		(SO_4)	523.9	30.64	Good
SULPHIDES		(S)	0.0	0.00	Good
NITRATES		(NO_3)	7.0	0.41	Good
CALCIUM	(LIME)	(CA)	200.0	11.70	Good
MAGNESIUM		(MG)	18.5	1.08	Good
SODIUM		(NA)	125.8	7.36	Good
BORON		(B)	0.05	-	Good
IRON		(FE)	0.1	-	Good
HARDNESS AS $CaCO_3$			576.0	33.68	Good
TOTAL SOLIDS @ 105°C			1076.3	62.94	
TOTAL SOLIDS @ RED HEAT			1010.7	59.10	
pH (HYDROGEN ION CONCENTRATION)			- 8.4		Fair-Good
SODIUM PERCENTAGE			32.2%		Good
COLOR	Water White				
ODOR	None				
TURBIDITY	Clear				
CONDUCTIVITY, MHOS/CM³X10⁵@25°C.			-- 165.1		

	Theoretical Analysis	
Calcium Carbonate	6.0	0.35
Calcium Bicarbonate	226.9	13.27
Calcium Sulphate	481.9	28.18
Magnesium Sulphate	91.5	5.35
Sodium Sulphate	164.1	9.60
Sodium Chloride	184.7	10.80

REMARKS: As indicated by the last column above, this sample would be classified as excellent for irrigation use.

Respectfully submitted,

HORNKOHL LABORATORIES

Frank Hornkohl

ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS. AUTHORIZATION FOR PUBLICATION OF OUR REPORTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING THEM IS RESERVED PENDING OUR WRITTEN APPROVAL AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES.

KERN PTG. CO.

105/6E-15D2

AGRICULTURAL CONSULTANTS
CHEMISTS
APPROVED WATER LABORATORY

PHONE 684-1881
AREA CODE 714

LABORATORIES
3215 CHICAGO AVENUE

ESTABLISHED 1906

EDWARD S. BABCOCK & SONS, Inc.

P. O. BOX 432
RIVERSIDE, CALIFORNIA 92502

3/9/79

TO Roadrunner Tree Farm
P.O. Box A
Borrego Springs, CA. 92004

Lab No. 790305-4
Invoice No. 86346

	Submitted	Sampled
By	Mail	
Date	3/5/79	
Time	8:30	

SAMPLE MARKED Well #14

☐ General Mineral ☐ Inorganic Chemical ☐ General Physical ☐ As Marked ☐ Basic ☐ Domestic

☒ Total Hardness as $CaCO_3$ 820 mg/l ☒ Calcium (Ca) 288 mg/l 14.40 me/l ☒ Magnesium (Mg) 24 mg/l 2.00 me/l AM 3/7	☒ Total Alkalinity as $CaCO_3$ 165 mg/l ☒ Hydroxide (OH) 0 mg/l 0.00 me/l ☒ Carbonate (CO_3) 0 mg/l 0.00 me/l ☒ Bicarbonate (HCO_3) 201 mg/l 3.30 me/l AM 3/6	☒ Electrical Conductivity EC x 10^4 @ 25°C 2340 µmho/cm³ AM 3/5	☒ Total Dissolved Residue @ 180°C 1995 mg/l AC 3/7	☐ mg/l	☐ mg/l
		☒ pH 7.5 units AM 3/5	☐ Arsenic (As) mg/l	☐ Copper (Cu) mg/l	☐ Mercury (Hg) mg/l
☒ Sodium (Na) 220 mg/l 9.57 me/l AC 3/7	☒ Sulfate (SO_4) 780 mg/l 16.25 me/l AM 3/8	☒ Color 0 units AM 3/6	☐ Barium (Ba) mg/l	☒ Fluoride (F) 0.3 mg/l AC 3/6	☐ MBAS mg/l
		☒ Odor No Odor Observed TON AM 3/6	☒ Boron (B) 0.1 mg/l AC 3/6	☒ Iron (Fe) 0.24 mg/l AM 3/5	☐ Selenium (Se) mg/l
☒ Potassium (K) 17 mg/l 0.44 me/l AC 3/7	☒ Chloride (Cl) 153 mg/l 4.30 me/l AM 3/5	☒ Turbidity 0 NTU AM 3/6	☐ Cadmium (Cd) mg/l	☐ Lead (Pb) mg/l	☐ Silver (Ag) mg/l
☐ Ammonium (NH_4) mg/l mg/l	☒ Nitrate (NO_3) 110 mg/l 1.77 me/l AM 3/5	☐ mg/l	☐ Chromium (Cr) Total mg/l	☒ Manganese (Mn) 0.00 mg/l LJC 3/8	☐ Zinc (Zn) mg/l
Cations Total 26.41 me/l	Anions Total 25.62 me/l				

EDWARD S. BABCOCK & SONS, Inc.

Well No. 14

Location BORREGO

10S/6E-15D2

DATE	MAR. 1965	7/5/65					
Total Soluble Salts ($EC \times 10^3$)	1.4	2.2					
pH (1-7 Acid; 7-14 Basic)	7.0	7.6					
Boron (parts per million)	—	—					
Nitrogen (pounds per acre ft.)	65.5	154					
Sodium percentage (%)	47.4						
CATIONS -							
Calcium (meq./liter)							
Magnesium "	7.14	14.6					
Sodium "	6.78	8.1					
Potassium "	0.26	0.28					
TOTAL	14.2	22.98					
ANIONS -							
Carbonate (meq./liter)	0	0					
Bicarbonate "	2.12	2.91					
Chloride "	2.50	4.14					
Nitrate "	1.45	4.02					
Sulfate *	8.1	11.91					
TOTAL	14.2	22.98					

* Sulfate determined by difference.

Well No. 14

Location PORRECA FARMS

10S/6E-15D2

DATE	April 1962	Sept 1962	Dec 1962	Sept 1963	June 1964	March 1965
Total Soluble Salts (ECx10^3)	2.65	2.97	2.50	1.65	1.48	1.4
pH (1-7 Acid; 7-14 Basic)	7.7	7.5	8.5	7.6	7.9	7.0
Boron (parts per million)	0.46	—	0.24	-	—	—
Nitrogen (pounds per acre ft.)	186	159	170	72.6	65.5	53.9
Sodium percentage (%)	34%	34%	37%	41%	47.4	47.7
CATIONS -						
Calcium (meq./liter)	13.9	18.5	15.0	9.63	7.44	7.14
Magnesium "	5.55	3.27				
Sodium "	10.2	11.65	9.00	6.90	6.96	6.78
Potassium "	0.36	0.375	0.318	0.270	0.288	0.26
TOTAL	30.0	33.8	24.3	16.8	14.68	14.2
ANIONS -						
Carbonate (meq./liter)	TR	TR	TR	0	0	0
Bicarbonate "	3.17	2.76	2.77	2.60	2.02	2.12
Chloride "	4.7	5.17	4.47	2.44	2.66	2.50
Nitrate "	5.02	4.30	4.59	1.89	1.76	1.45
Sulfate *	17.1	21.6	12.5	9.87	8.24	8.1
TOTAL	30.0	33.8	24.3	16.8	14.68	14.2

* Sulfate determined by difference.

Analyses-DiGiorgio Fruit Corporation

July 7, 1965

Total Soluble Salts (ECx10³)	2.2	EC x 10⁻⁶ 2,200
pH	7.6	
Boron (ppm)		
Nitrogen (lb/acre-ft)	154	
Sodium(%) 35%		

Cations (meq/l)	EPM	PPM
Ca		
Mg	14.6	178
Na	8.1	186
K	0.28	11
Anions (meq/l) Total	22.98	
CO_2	0	0
HCO_3	2.91	178
Cl	4.14	147
NO_3	4.02	249
SO_4	11.91	572
TOTAL	22.98	

Sum = 1,431

Hardness 444.5

23 | 8.0 .3

FORM 258

DIVISION OF WATER RESOURCES

Ground Water Analyses

Region 7
Investigation Gen. Water Qual.
County San Diego Near

Basin Borrego Valley
DWR No. 10S/6E-15D2, SB B&M
Other Nos owner #14
10S/6E-15D2

[redacted]

Use irrig. Depth 700' Date Completed 1952 Capacity (gpm) 1500 SWL
Drawdown Perforations Size Casing & Depth 16"
Gravel Packed Seal At What Depth Log Water Level Record
Surface Elev. 686 Datum sea level Source of Information

Lab./Field No.	64821											
Sampled By												
Date Collected												
Date Analyzed	4-28-52											
Temperature/pH			7.7									
EC x 10^6 @ 25° C	1765											
Constituents in	epm	% RV	ppm	epm	% RV	ppm	epm	% RV	ppm	epm	% RV	ppm
Cations: Ca			178.8									
Mg			3.7									
Na			46.5									
K												
Total Cations												
Anions: CO_3			0.0									
HCO_3			176.3	88.2								
SO_4			273.1									
Cl			95.1									
NO_3			21.0									
F			~~0.1~~									
Total Anions												
Balance												
Boron			0.10									
Silica												
Fe			0.1									
Total Solids/Sum	619.2		706									
Per Cent Sodium		17.9										
Hardness: Total/NC	462.0											
Laboratory/Chemist	Hornkohl											
Copied: Date/By	9-1-53		H. Blaney									

REMARKS: 1. submitted by Di Giorgio
2.
3.
4.

HORNKOHL LABORATORIES

Telephone 8-8567

ANALYSES OF OIL, WATERS, SOILS, OIL CORES

P. O. Box 1673

714 TRUXTUN AVENUE
BAKERSFIELD, CALIFORNIA

May 12, 1953

Laboratory No. 71034-35

Sample Water

Marked BORREGO as shown below

Received May 8, 1953

Submitted by Di Giorgio Farms
Di Giorgio, California

* * * * * * * *

PARTIAL IRRIGATION WATER ANALYSES

WELL #14

Constituents		Parts per Million	Grains per Gallon	Water Classification
Carbonates	CO_3	0.0	0.00	Good
Bicarbonates	HCO_3	164.7	9.63	Good
Chlorides	Cl	99.3	5.81	Good
Sulfates	SO_4	405.7	23.73	Good
Sulfides	S	0.0	0.00	Good
Boron	B	0.10		Good
Hardness as $CaCO_3$		475.0	27.78	Good
pH — 7.6				Good
Sodium Percentage — 31.9%				Good

Color: Water White
Odor: None
Turbidity: Clear
Conductivity: (Mhos/cm^3 x 10^5 @25°C.) — 140.6

WELL #15

Carbonates	CO_3	0.0	0.00	Good
Bicarbonates	HCO_3	161.0	9.42	Good
Chlorides	Cl	163.5	9.56	Good
Sulfates	SO_4	615.9	36.02	Good
Sulfides	S	0.0	0.00	Good
Boron	B	0.10		Good
Hardness as $CaCO_3$		736.0	42.04	Good
pH — 7.5				Good
Sodium Percentage — 26.6%				

Color: Water White
Odor: None
Turbidity: Clear
Conductivity: (Mhos/cm^3 x 10^5 @25°C.) — 207.6

REMARKS: As noted by the classification above, these samples would both be listed as excellent for irrigation use.

Well No. 14

Location BORREGO

DATE	MAR. 1965	7/5/65					
Total Soluble Salts ($EC \times 10^3$)	1.4	2.2					
pH (1-7 Acid; 7-14 Basic)	7.0	7.6					
Boron (parts per million)	—	—					
Nitrogen (pounds per acre ft.)	65.5	154					
Sodium percentage (%)	47.4						
CATIONS -							
Calcium (meq./liter)							
Magnesium "	7.14	14.6					
Sodium "	6.78	8.1					
Potassium "	0.26	0.28					
TOTAL	14.2	22.98					
ANIONS -							
Carbonate (meq./liter)	0	0					
Bicarbonate "	2.12	2.91					
Chloride "	2.50	4.14					
Nitrate "	1.45	4.02					
Sulfate *	8.1	11.91					
TOTAL	14.2	22.98					

* Sulfate determined by difference.

Well No. 14

Location PORRECO FIRMS

DATE	April 1962	Sept 1962	Dec 1962	Sept 1963	June 1964	March 1965
Total Soluble Salts ($ECx10^3$)	2.65	2.97	2.50	1.65	1.48	1.4
pH (1-7 Acid; 7-14 Basic)	7.7	7.5	8.5	7.6	7.9	7.0
Boron (parts per million)	0.46	—	0.24	-	—	—
Nitrogen (pounds per acre ft.)	186	159	170	72.6	65.5	53.9
Sodium percentage (%)	34%	34%	37%	41%	47.4	47.7
CATIONS -						
Calcium (meq./liter)	13.9	18.5	15.0	9.63	7.44	7.14
Magnesium "	5.55	3.27				
Sodium "	10.2	11.65	9.00	6.90	6.96	6.78
Potassium "	0.36	0.375	0.318	0.270	0.288	0.26
TOTAL	30.0	33.8	24.3	16.8	14.68	14.2
ANIONS -						
Carbonate (meq./liter)	TR	TR	TR	0	0	0
Bicarbonate "	3.17	2.76	2.77	2.60	2.02	2.12
Chloride "	4.7	5.17	4.47	2.44	2.66	2.50
Nitrate "	5.02	4.30	4.59	1.89	1.76	1.45
Sulfate *	17.1	21.6	12.5	9.87	8.24	8.1
TOTAL	30.0	33.8	24.3	16.8	14.68	14.2

* Sulfate determined by difference.

RTHUR L. BABCOCK
ILLARD G. BABCOCK
HERMAN G. BABCOCK

CERTIFICATE OF ANALYSIS

ESTABLISHED 1906

EDWARD S. BABCOCK & SONS

P. O. BOX 432
RIVERSIDE, CALIFORNIA

AGRICULTURAL
APPRAISALS
SUPERVISION
MANAGEMENT
LABORATORIES
3445 FIRST STREET

DiGiorgio Fruit Corporation
P. O. Box A
Borrego Springs, California

SAMPLE MARKED Water #14

September 2, 1955

ABORATORY NO. 550813-L

Electrical Conductance ($EC \times 10^6$) determined at 25° Centigrade.

Electrical Conductance - - - - - - 1377

Sodium Percent (Na%) - - - - - - - 39.2%

	Parts per Million:	Milligrams Equivalent:
Calcium (Ca)	142	7.10
Magnesium (Mg)	12	1.00
Sodium (Na)	120	5.22
Carbonate (CO_3)	.6	.20
Bicarbonate (HCO_3)	113	1.85
Sulfate (SO_4)	394	8.21
Chloride (Cl)	67	1.90
Nitrate (NO_3)	79	1.27
Boron (B)	.09	

EDWARD S. BABCOCK & SONS

Herman G. Babcock

elephone
.8567

HORNKOHL LABORATORIES

P.O. Box 1673

Analyses of Oil, Waters, Soils, Oil Cores

714 Truxtun Avenue
Bakersfield, California

May 10, 1952

COPY

aboratory No. 64821
ample Water
eceived April 28, 1952
ubmitted by Di Giorgio Farms
Di Giorgio, Calif.

Marked Well #14

* * * * * * * *

COMPLETE IRRIGATION WATER ANALYSIS

Constituents		Parts per Million	Grains per Gallon	Water Classification
Carbonates	CO_3	0.0	0.00	Good
Bicarbonates	HCO_3	176.3	10.31	Good
Chlorides	Cl	95.1	5.56	Good
Sulfates	SO_4	273.1	15.97	Good
Sulfides	S	0.0	0.00	Good
Calcium	Ca	178.8	10.45	Good
Magnesium	Mg	3.7	0.22	Good
Sodium	Na	46.5	2.72	Good
Boron	B	0.10		Good
Nitrates	NO_3	21.0		
Iron	Fe	0.1		
Hardness as $CaCO_3$		462.0	27.02	Good
pH -- 7.7				Good
Sodium Percentage -- 17.9%				Good
Color:	Water White			
Odor:	None			
Turbidity:	Clear			
Conductivity: $Kx10^5$ @ 25°C. --		176.5		
Total Solids @ 105°C.		685.2	40.07	
Total Solids @ Red Heat		619.2	36.21	

Theoretical Analysis		
Calcium Bicabonate	234.2	13.69
Calcium Sulfate	387.3	22.65
Calcium Chloride	19.9	1.15
Magnesium Chloride	14.2	0.83
Sodium Chloride	118.1	6.91

REMARKS: As noted by the last column above, this sample would be classified as excellent for irrigation use.

UNIVERSITY OF CALIFORNIA
Berkeley 4, California

COLLEGE OF AGRICULTURE
Division of Plant Nutrition

REPORT OF WATER ANALYSIS

County San Diego Date Received 6/6/51

Laboratory No. 8672 Sampler's No. 7

Submitted by E. C. Moore, Farm Advisor, San Diego

Location and Description Diorgio Fruit Corp. 4½ mi. NE of Borrego Springs
NW½ Sec. 15, T 10S R 6E
Well 700' deep, 3 months old
Irrigation

Color ---- Turbidity ---- Odor ----

E. C. Millimhos/cm 1.21 pH 7.2 Boron (p.p.m.) 0.16

CONSTITUENT	P.P.M.	M.E./L.	CONSTITUENT	P.P.M.	M.E./L.
Calcium (Ca)	120	5.9	Carbonate (CO_3)	---	---
Magnesium (Mg)	15	1.4	Bicarbonate (HCO_3)	220	3.6
Sodium (Na)	120	5.3	Chloride (Cl)	75	2.1
			Sulfate (SO_4)	335	6.9
Total Cations		12.6	Total Anions		12.6

Per cent Na 42 Possible per cent Na 59 Analyst JS

Recommendation Fair quality water for irrigation

Date Reported 7/13/51 Reported by J. C. Martin

915 p.p.m. approx total.

HORNKOHL LABORATORIES

TELEPHONE 8-8567 ANALYSES OF OIL, WATERS, SOILS, OIL CORES P. O. Box 1673

714 TRUXTUN AVENUE
BAKERSFIELD, CALIFORNA

April 12, 1951

Laboratory No. 58618

Sample Water Marked Well No. 14

Received April 7, 1951

Submitted by DiGiorgio Farms,
DiGiorgio, Calif.

* * * * * * *

COMPLETE IRRIGATION WATER ANALYSIS

CONSTITUENTS		PARTS PER MILLION	GRAINS PER GALLON	IRRIGATION WATER CLASSIFICATION
Carbonates	(CO_3)	9.6	0.56	Fair
Bicarbonates	(HCO_3)	172.0	10.06	Good
Chlorides	(Cl)	83.7	4.89	Good
Sulphates	(SO_4)	381.1	22.28	Good
Sulphides	(S)	0.0	0.00	Good
Nitrates	(NO_3)	32.0	1.87	Excellent
Calcium	(Ca)	138.0	8.07	Good
Magnesium	(Mg)	20.7	1.21	Good
Sodium	(Na)	123.3	7.21	Good
Boron	(B)	0.30	—	Good
Iron	(Fe)	0.01	—	Good
Hardness as $CaCO_3$		430.0	25.15	Good
pH	— 8.3			Fair
Sodium Percentage	— 38.4%			Good
Color	— Water White			
Odor	— None			
Turbidity	— Clear			
Conductivity, $K \times 10^5$ @ 25°C.	— 155			
Total Solids @ 105°C.		874.0	51.11	
Total Solids @ Red Heat		769.0	44.95	

Theoretical Analysis

Calcium Carbonate	16.0	0.93
Calcium Bicarbonate	228.5	13.36
Calcium Sulphate	255.9	14.96
Magnesium Sulphate	102.3	5.98
Sodium Sulphate	176.1	10.29
Sodium Nitrate	44.2	2.58
Sodium Chloride	137.9	8.06

REMARKS: It will be noted that the Nitrates (available Nitrogen) are very high in this water, which is exceedingly beneficial. The sample would be classified as excellent for irrigation water use.

HORNKOHL LABORATORIES

Telephone 8-8567

ANALYSES OF OIL, WATERS, SOILS, OIL CORES

P. O. Box 1673

714 TRUXTUN AVENUE
BAKERSFIELD, CALIFORNIA

May 12, 1953

Laboratory No. 71034-35

Sample Water

Marked BORREGO as shown below #14

Received May 8, 1953

Submitted by Di Giorgio Farms
Di Giorgio, California

* * * * * * * *

PARTIAL IRRIGATION WATER ANALYSES

WELL #14

Constituents		Parts per Million	Grains per Gallon	Water Classification
Carbonates	CO_3	0.0	0.00	Good
Bicarbonates	HCO_3	164.7	9.63	Good
Chlorides	Cl	99.3	5.81	Good
Sulfates	SO_4	405.7	23.73	Good
Sulfides	S	0.0	0.00	Good
Boron	B	0.10		Good
Hardness as $CaCO_3$		475.0	27.78	Good
pH — 7.6				Good
Sodium Percentage — 31.9%				Good

Color: Water White
Odor: None
Turbidity: Clear
Conductivity: (Mhos/cm^3 x 10^5 @25°C.) — 140.6

HORNKOHL LABORATORIES

Telephone 8-8567

ANALYSES OF OIL, WATERS, SOILS, OIL CORES

P. O. Box 1673

714 TRUXTUN AVENUE
BAKERSFIELD, CALIFORNIA

May 10, 1952

Laboratory No. 64821

Sample Water Marked Well #14

Received April 28, 1952

Submitted by Di Giorgio Farms
Di Giorgio, California

* * * * * * * *

COMPLETE IRRIGATION WATER ANALYSIS

Constituents		Parts per Million	Grains per Gallon	Water Classification
Carbonates	CO_3	0.0	0.00	Good
Bicarbonates	HCO_3	176.3	10.31	Good
Chlorides	Cl	95.1	5.56	Good
Sulfates	SO_4	273.1	15.97	Good
Sulfides	S	0.0	0.00	Good
Calcium	Ca	178.8	10.45	Good
Magnesium	Mg	3.7	0.22	Good
Sodium	Na	46.5	2.72	Good
Boron	B	0.10		Good
Nitrates	NO_3	21.0		
Iron	Fe	0.1		
Hardness as $CaCO_3$		462.0	27.02	Good
pH — 7.7				Good
Sodium Percentage — 17.9%				Good
Color: Water White				
Odor: None				
Turbidity: Clear				
Conductivity: $K \times 10^5$ @ 25°C. —		176.5		
Total Solids @ 105°C.		685.2	40.07	
Total Solids @ Red Heat		619.2	36.21	

Theoretical Analysis

Calcium Bicarbonate	234.2	13.69
Calcium Sulfate	387.3	22.65
Calcium Chloride	19.9	1.15
Magnesium Chloride	14.2	0.83
Sodium Chloride	118.1	6.91

REMARKS: As noted by the last column above, this sample would be classified as excellent for irrigation use.

TEL. 8-8567 P. O. BOX 867

HORNKOHL LABORATORIES

CHEMICAL AND TESTING ENGINEERS

714 TRUXTUN AVENUE

BAKERSFIELD, CALIFORNIA

January 20, 1954

Laboratory No. 74764

Sample Water *Marked* Well No. 14

Received January 15, 1954

Submitted by Mr. A. F. Peterson FOR
DiGiorgio Fruit Corporation
Borrego Farms

* * * * * * * * * * *

IRRIGATION WATER ANALYSIS

CONSTITUENTS			PARTS PER MILLION	GRAINS PER GALLON	IRRIGATION WATER CLASSIFICATION
CARBONATES	(ALKALI)	(CO_3)	0.0	0.00	Good
BICARBONATES		(HCO_3)	175.7	10.27	Good
CHLORIDES	(SALT)	(Cl)	105.0	6.14	Good
SULPHATES		(SO_4)	528.4	30.90	Good
SULPHIDES		(S)	0.0	0.00	Good
NITRATES		(NO_3)			
CALCIUM	(LIME)	(CA)			
MAGNESIUM		(MG)			
SODIUM		(NA)			
BORON		(B)	1		
IRON		(FE)	0.15	-	Good
HARDNESS AS $CaCO_3$					
TOTAL SOLIDS @ 105°C			490.0	28.66	Good
TOTAL SOLIDS @ RED HEAT					
pH (HYDROGEN ION CONCENTRATION)			7.6		Good
SODIUM PERCENTAGE			41.8%		Good
COLOR	Water White				
ODOR	None				
TURBIDITY	Clear				
CONDUCTIVITY, MHOS/CM³X10⁵@25°C.			- 145.3		

REMARKS:

As indicated above this sample would be classified as excellent for irrigation use.

ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS. AUTHORIZATION FOR PUBLICATION OF OUR REPORTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING THEM IS RESERVED PENDING OUR WRITTEN APPROVAL AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES.

KERN PTG. CO.

TEL. 8-8567

P. O. BOX 867

HORNKOHL LABORATORIES

CHEMICAL AND TESTING ENGINEERS
714 TRUXTUN AVENUE
BAKERSFIELD, CALIFORNIA

October 8, 1954

Laboratory No. ~~79503~~ 79500

Sample Water

Marked 9/25/54: Well #14

Received Sept. 29, 1954

Submitted by Mr. A. F. Peterson
Bakersfield, Calif.

* * * * * * * * * * *

IRRIGATION WATER ANALYSIS

CONSTITUENTS			PARTS PER MILLION	GRAINS PER GALLON	IRRIGATION WATER CLASSIFICATION
CARBONATES	(ALKALI)	(CO_3)	3.6	0.21	Fair-Good
BICARBONATES		(HCO_3)	170.8 2.78	9.99	Good
CHLORIDES	(SALT)	(Cl)	112.1	6.56	Good
SULPHATES		(SO_4)	523.9	30.64	Good
SULPHIDES		(S)	0.0	0.00	Good
NITRATES		(NO_3)	7.0	0.41	Good
CALCIUM	(LIME)	(CA)	200.0	11.70	Good
MAGNESIUM		(MG)	18.5	1.08	Good
SODIUM		(NA)	125.8	7.36	Good
BORON		(B)	0.05	-	Good
IRON		(FE)	0.1	-	Good
HARDNESS AS $CaCO_3$			576.0	33.68	Good
TOTAL SOLIDS @ 105°C			1076.3	62.94	
TOTAL SOLIDS @ RED HEAT			1010.7	59.10	
pH (HYDROGEN ION CONCENTRATION)			- 8.4		Fair-Good
SODIUM PERCENTAGE			32.2%		Good
COLOR	Water White				
ODOR	None				
TURBIDITY	Clear				
CONDUCTIVITY, MHOS/CM³X10⁵@25°C.			-- 165.1		

	Theoretical Analysis	
Calcium Carbonate	6.0	0.35
Calcium Bicarbonate	226.9	13.27
Calcium Sulphate	481.9	28.18
Magnesium Sulphate	91.5	5.35
Sodium Sulphate	164.1	9.60
Sodium Chloride	184.7	10.80

REMARKS: As indicated by the last column above, this sample would be classified as excellent for irrigation use.

Respectfully submitted,

HORNKOHL LABORATORIES

Frank Hornkohl

ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS. AUTHORIZATION FOR PUBLICATION OF OUR REPORTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING THEM IS RESERVED PENDING OUR WRITTEN APPROVAL AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES.

KERN PTG. CO.

ARTHUR L. BABCOCK
WILLARD G. BABCOCK
SHERMAN G. BABCOCK

CERTIFICATE OF ANALYSIS

ESTABLISHED 1906

EDWARD S. BABCOCK & SONS

P. O. BOX 432
RIVERSIDE, CALIFORNIA

AGRICULTURAL
APPRAISALS
SUPERVISION
MANAGEMENT
LABORATORIES
3445 FIRST STREET

TO DiGiorgio Fruit Corp.,
Box "A"
Borrego Springs, Calif.

March21, 1955

SAMPLE MARKED Water
Well #14

LABORATORY NO. 550317-C

Electrical Conductance ($EC \times 10^6$) determined at 25° Centigrade.

Electrical Conductance - - - - - - 2941

Sodium Percent (Na%) - - - - - - - 34.4%

	Parts per Million:	Milligrams Equivalent:
Calcium (Ca)	355	17.75
Magnesium (Mg)	36	3.00
Sodium (Na)	250	10.87
Carbonate (CO_3)	None	——
Bicarbonate (HCO_3)	140	2.30
Sulfate (SO_4)	1167	24.31
Chloride (Cl)	128	3.60
Nitrate (NO_3)	63	1.02
Boron (B)	.08	

EDWARD S. BABCOCK & SONS

Sherman G. Babcock

TEL. 8-8567

P. O. BOX 867

HORNKOHL LABORATORIES

CHEMICAL AND TESTING ENGINEERS

714 TRUXTUN AVENUE

BAKERSFIELD, CALIFORNIA December 10, 1954

Laboratory No. 81661

Sample Water *Marked* Well #F 14

Received December 3, 1954

Submitted by Borrego Farms, Attn: Mr. Hasel
Borrego Springs,
California

* * * * * * * * * * *

IRRIGATION WATER ANALYSIS

CONSTITUENTS			PARTS PER MILLION	GRAINS PER GALLON	IRRIGATION WATER CLASSIFICATION
CARBONATES	(ALKALI)	(CO_3)	0.0	0.00	Good
BICARBONATES		(HCO_3)	153.7	8.99	Good
CHLORIDES	(SALT)	(Cl)	163.2	9.54	Good
SULPHATES		(SO_4)	864.0	50.53	Good
SULPHIDES		(S)	0.0	0.00	Good
NITRATES		(NO_3)	31.2	---	Good
CALCIUM	(LIME)	(CA)	352.8	20.63	Good
MAGNESIUM		(MG)	44.4	2.60	Good
SODIUM		(NA)	88.3	5.16	Good
BORON		(B)	0.15	---	Good
IRON		(FE)	.1	---	Good
HARDNESS AS $CaCO_3$			1064.0	62.22	Good
TOTAL SOLIDS @ 105°C			1620.8	94.78	
TOTAL SOLIDS @ RED HEAT			1564.1	91.46	
pH (HYDROGEN ION CONCENTRATION)			7.4		Good
SODIUM PERCENTAGE			15.3 %		

COLOR Water White

ODOR None

TURBIDITY Clear

CONDUCTIVITY, MHOS/CM³X10⁵@25°C. 265.8

THEORETICAL ANALYSIS

Calcium Bicarbonate	153.7	8.99
Calcium Sulfate	1029.2	60.18
Magnesium Sulfate	173.3	10.13
Magnesium Chloride	36.2	2.12
Sodium Chloride	224.5	13.13

REMARKS; The above sample would be classified as good for irrigation use.

Respectfully submitted,

HORNKOHL LABORATORIES

Frank Hornkohl

by

ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS. AUTHORIZATION FOR PUBLICATION OF OUR REPORTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING THEM IS RESERVED PENDING OUR WRITTEN APPROVAL AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES.

KERN PTG. CO.

EDWARD S. BABCOCK
ARTHUR L. BABCOCK
WILLARD G. BABCOCK
SHERMAN G. BABCOCK

CERTIFICATE OF ANALYSIS

ESTABLISHED 1906

EDWARD S. BABCOCK & SONS
P. O. BOX 432
RIVERSIDE, CALIFORNIA

AGRICULTURAL
APPRAISALS
SUPERVISION
MANAGEMENT
CHEMICAL LABORATORIES
3445 FIRST STREET

TO DiGiorgio Fruit Corp.
P. O. Box A
Borrego Springs, Calif.

December 13, 1954

LABORATORY NO. 541202-F

SAMPLE MARKED Water, Well #F 14

Electrical Conductance ($EC \times 10^6$) determined at 25° Centigrade.

Electrical Conductance - - - - - 2955

Sodium Percent (Na%) - - - - - - 32.5%

	Parts per Million:	Milligrams Equivalent:
Calcium (Ca)	351	17.55
Magnesium (Mg)	39	3.25
Sodium (Na)	230	10.00
Carbonate (CO_3)	None	——
Bicarbonate (HCO_3)	140	2.30
Sulfate (SO_4)	1105	23.03
Chloride (Cl)	160	4.50
Nitrate (NO_3)	60	.97
Boron (B)	.09	

EDWARD S. BABCOCK & SONS

Sherman G. Babcock

ARTHUR L. BABCOCK
WILLARD G. BABCOCK
SHERMAN G. BABCOCK

CERTIFICATE OF ANALYSIS

ESTABLISHED 1906

EDWARD S. BABCOCK & SONS

P. O. BOX 432
RIVERSIDE, CALIFORNIA

AGRICULTURAL
APPRAISALS
SUPERVISION
MANAGEMENT
LABORATORIES
3445 FIRST STREET

TO DiGiorgio Fruit Corporation
P. O. Box A
Borrego Springs, California

SAMPLE MARKED Water #14

September 2, 1955

LABORATORY NO. 550818-L

Electrical Conductance ($ECx10^6$) determined at 25° Centigrade.

Electrical Conductance - - - - - - 1377

Sodium Percent (Na%) - - - - - - - 39.2%

	Parts per Million:	Milligrams Equivalent:
Calcium (Ca)	142	7.10
Magnesium (Mg)	12	1.00
Sodium (Na)	120	5.22
Carbonate (CO_3)	6	.20
Bicarbonate (HCO_3)	113	1.85
Sulfate (SO_4)	394	8.21
Chloride (Cl)	67	1.90
Nitrate (NO_3)	79	1.27
Boron (B)	.09	

EDWARD S. BABCOCK & SONS

Sherman G. Babcock

WILLARD G. BABCOCK
ARTHUR L. BABCOCK
SHERMAN G. BABCOCK

CERTIFICATE OF ANALYSIS

ESTABLISHED 1906

EDWARD S. BABCOCK & SONS

P. O. BOX 432
RIVERSIDE, CALIFORNIA

AGRICULTURAL
APPRAISALS
SUPERVISION
MANAGEMENT

LABORATORIES
3445 FIRST ST.

TO Borrego Farms
P. O. Box A
Borrego Springs
California

SAMPLE MARKED Water
Well #14

March 29, 1956

Laboratory No. 560327-C

Cations	Parts per million	Milligram equivalents per liter	Anions	Parts per million	Milligram equivalent per liter
Calcium (Ca)	400	20.00	Carbonate (CO_3)	None	----
Magnesium (Mg)	43	3.58	Bicarbonate (HCO_3)	143	2.35
Sodium (Na)	265	11.52	Sulfate (SO_4)	1258	26.21
Potassium (K)			Chloride (Cl)	165	4.65
			Nitrate (NO_3)	110	1.77

			Parts per million
Conductivity, $EC \times 10^6$ @ 25° C.	3302	Total Hardness calculated as $CaCO_3$	1179
Percent Sodium	30.5	Fluoride (F)	
Hydrogen-ion activity (pH)		Boron (B)	.28

EDWARD S. BABCOCK & SONS

Sherman G. Babcock

WILLARD G. BABCOCK
ARTHUR L. BABCOCK
SHERMAN G. BABCOCK

CERTIFICATE OF ANALYSIS

ESTABLISHED 1906

EDWARD S. BABCOCK & SONS

P. O. BOX 432
RIVERSIDE, CALIFORNIA

AGRICULTURAL
APPRAISALS
SUPERVISION
MANAGEMENT

LABORATORIES
3445 FIRST ST.

TO DiGiorgio Fruit Corp.
Box A
Borrego Springs, Calif.

SAMPLE MARKED Well 14

October 3, 1956

Laboratory No. 560921-L

Cations	Parts per million	Milligram equivalents per liter	Anions	Parts per million	Milligram equivalents per liter
Calcium (Ca)	124	6.20	Carbonate (CO_3)	none	----
Magnesium (Mg)	23	1.92	Bicarbonate (HCO_3)	122	2.00
Sodium (Na)	144	6.26	Sulfate (SO_4)	450	9.38
Potassium (K)			Chloride (Cl)	92	2.60
			Nitrate (NO_3)	35	.56

			Parts per million
Conductivity, $EC \times 10^6$ @ 25° C.	1423	Total Hardness calculated as $CaCO_3$	406
Percent Sodium	43.5	Fluoride (F)	
Hydrogen-ion activity (pH)		Boron (B)	.2

EDWARD S. BABCOCK & SONS

Sherman G. Babcock

ARTHUR L. BABCOCK
WILLARD G. BABCOCK
SHERMAN G. BABCOCK

CERTIFICATE OF ANALYSIS

ESTABLISHED 1906

EDWARD S. BABCOCK & SONS

P. O. BOX 432
RIVERSIDE, CALIFORNIA

AGRICULTURAL
APPRAISALS
SUPERVISION
MANAGEMENT
LABORATORIES
3445 FIRST STREET

TO DiGiorgio Fruit Corporation
P. O. Box A
Borrego Springs, California

SAMPLE MARKED Water #14

September 2, 1955

LABORATORY NO. 550818-I

Electrical Conductance ($EC \times 10^6$) determined at 25° Centigrade.

Electrical Conductance - - - - - - 1377

Sodium Percent (Na%) - - - - - - - 39.2%

	Parts per Million:	Milligrams Equivalent:
Calcium (Ca)	142	7.10
Magnesium (Mg)	12	1.00
Sodium (Na)	120	5.22
Carbonate (CO_3)	6	.20
Bicarbonate (HCO_3)	113	1.85
Sulfate (SO_4)	394	8.21
Chloride (Cl)	67	1.90
Nitrate (NO_3)	79	1.27
Boron (B)	.09	

EDWARD S. BABCOCK & SONS

Sherman G. Babcock

UNIVERSITY OF CALIFORNIA
Berkeley 4, California

COLLEGE OF AGRICULTURE
Division of Plant Nutrition

REPORT OF WATER ANALYSIS

County San Diego Date Received 6/6/51

Laboratory No. 8672 Sampler's No. 7

Submitted by E. C. Moore, Farm Advisor, San Diego

Location and Description [redacted]

Color ---- Turbidity ---- Odor ----

E. C. Millimhos/cm 1.21 pH 7.2 Boron (p.p.m.) 0.16

CONSTITUENT	P.P.M.	M.E./L.	CONSTITUENT	P.P.M.	M.E./L.
Calcium (Ca)	120	5.9	Carbonate (CO_3)	---	---
Magnesium (Mg)	15	1.4	Bicarbonate (HCO_3)	220	3.6
Sodium (Na)	120	5.3	Chloride (Cl)	75	2.1
			Sulfate (SO_4)	335	6.9
Total Cations		12.6	Total Anions		12.6

Per cent Na 42 Possible per cent Na 59 Analyst JS

Recommendation Fair quality water for irrigation

Date Reported 7/13/51 Reported by J. C. Martin

915 p.p.m. approx total.

HORNKOHL LABORATORIES

TELEPHONE 8-8567 ANALYSES OF OIL, WATERS, SOILS, OIL CORES P. O. Box 1673

714 TRUXTUN AVENUE
BAKERSFIELD, CALIFORNA

April 12, 1951

Laboratory No. 58618

Sample Water Marked Well No. 14

Received April 7, 1951

Submitted by DiGiorgio Farms,
DiGiorgio, Calif.

* * * * * * * *

COMPLETE IRRIGATION WATER ANALYSIS

CONSTITUENTS		PARTS PER MILLION	GRAINS PER GALLON	IRRIGATION WATER CLASSIFICATION
Carbonates	(CO_3)	9.6	0.56	Fair
Bicarbonates	(HCO_3)	172.0	10.06	Good
Chlorides	(Cl)	83.7	4.89	Good
Sulphates	(SO_4)	381.1	22.28	Good
Sulphides	(S)	0.0	0.00	Good
Nitrates	(NO_3)	32.0	1.87	Excellent
Calcium	(Ca)	138.0	8.07	Good
Magnesium	(Mg)	20.7	1.21	Good
Sodium	(Na)	123.3	7.21	Good
Boron	(B)	0.30	—	Good
Iron	(Fe)	0.01	—	Good
Hardness as $CaCO_3$		430.0	25.15	Good
pH	— 8.3			Fair
Sodium Percentage	— 38.4%			Good
Color	— Water White			
Odor	— None			
Turbidity	— Clear			
Conductivity, $K \times 10^5$ @ 25°C.	— 155			
Total Solids @ 105°C.		874.0	51.11	
Total Solids @ Red Heat		769.0	44.95	

Theoretical Analysis

Calcium Carbonate	16.0	0.93
Calcium Bicarbonate	228.5	13.36
Calcium Sulphate	255.9	14.96
Magnesium Sulphate	102.3	5.98
Sodium Sulphate	176.1	10.29
Sodium Nitrate	44.2	2.58
Sodium Chloride	137.9	8.06

REMARKS: It will be noted that the Nitrates (available Nitrogen) are very high in this water, which is exceedingly beneficial. The sample would be classified as excellent for irrigation water use.

HORNKOHL LABORATORIES

Telephone 8-8567

ANALYSES OF OIL, WATERS, SOILS, OIL CORES

P. O. Box 1673

714 TRUXTUN AVENUE
BAKERSFIELD, CALIFORNIA

May 12, 1953

Laboratory No. 71034-35

Sample Water

Marked BORREGO as shown below

Received May 8, 1953

Submitted by Di Giorgio Farms
Di Giorgio, California

* * * * * * * *

PARTIAL IRRIGATION WATER ANALYSES

WELL #14

Constituents		Parts per Million	Grains per Gallon	Water Classification
Carbonates	CO_3	0.0	0.00	Good
Bicarbonates	HCO_3	164.7	9.63	Good
Chlorides	Cl	99.3	5.81	Good
Sulfates	SO_4	405.7	23.73	Good
Sulfides	S	0.0	0.00	Good
Boron	B	0.10		Good
Hardness as $CaCO_3$		475.0	27.78	Good
pH — 7.6				Good
Sodium Percentage — 31.9%				Good

Color: Water White
Odor: None
Turbidity: Clear
Conductivity: (Mhos/cm^3 x 10^5 @25°C.) — 140.6

HORNKOHL LABORATORIES

Telephone 8-8567

ANALYSES OF OIL, WATERS, SOILS, OIL CORES

P. O. Box 1673

714 TRUXTUN AVENUE
BAKERSFIELD, CALIFORNIA

May 10, 1952

Laboratory No. 64821

Sample Water *Marked* Well #14

Received April 28, 1952

Submitted by Di Giorgio Farms
Di Giorgio, California

* * * * * * * *

COMPLETE IRRIGATION WATER ANALYSIS

Constituents		Parts per Million	Grains per Gallon	Water Classification
Carbonates	CO_3	0.0	0.00	Good
Bicarbonates	HCO_3	176.3	10.31	Good
Chlorides	Cl	95.1	5.56	Good
Sulfates	SO_4	273.1	15.97	Good
Sulfides	S	0.0	0.00	Good
Calcium	Ca	178.8	10.45	Good
Magnesium	Mg	3.7	0.22	Good
Sodium	Na	46.5	2.72	Good
Boron	B	0.10		Good
Nitrates	NO_3	21.0		
Iron	Fe	0.1		
Hardness as $CaCO_3$		462.0	27.02	Good
pH — 7.7				Good
Sodium Percentage — 17.9%				Good
Color: Water White				
Odor: None				
Turbidity: Clear				
Conductivity: $K \times 10^5$ @ 25°C. —		176.5		
Total Solids @ 105°C.		685.2	40.07	
Total Solids @ Red Heat		619.2	36.21	

Theoretical Analysis

Calcium Bicarbonate	234.2	13.69
Calcium Sulfate	387.3	22.65
Calcium Chloride	19.9	1.15
Magnesium Chloride	14.2	0.83
Sodium Chloride	118.1	6.91

REMARKS: As noted by the last column above, this sample would be classified as excellent for irrigation use.

TEL. 8-8567

P. O. BOX 867

HORNKOHL LABORATORIES

CHEMICAL AND TESTING ENGINEERS
714 TRUXTUN AVENUE
BAKERSFIELD, CALIFORNIA

January 20, 1954

Laboratory No. 74764

Sample Water *Marked* Well No. 14

Received January 15, 1954

Submitted by Mr. A. F. Peterson FOR
DiGiorgio Fruit Corporation
Borrego Farms

* * * * * * * * * * *

IRRIGATION WATER ANALYSIS

CONSTITUENTS			PARTS PER MILLION	GRAINS PER GALLON	IRRIGATION WATER CLASSIFICATION
CARBONATES	(ALKALI)	(CO_3)	0.0	0.00	Good
BICARBONATES		(HCO_3)	175.7	10.27	Good
CHLORIDES	(SALT)	(Cl)	105.0	6.14	Good
SULPHATES		(SO_4)	528.4	30.90	Good
SULPHIDES		(S)	0.0	0.00	Good
NITRATES		(NO_3)			
CALCIUM	(LIME)	(CA)			
MAGNESIUM		(MG)			
SODIUM		(NA)			
BORON		(B)			
IRON		(FE)	0.15	-	Good
HARDNESS AS $CaCO_3$					
TOTAL SOLIDS @ 105°C			490.0	28.66	Good
TOTAL SOLIDS @ RED HEAT					
pH (HYDROGEN ION CONCENTRATION)			7.6		Good
SODIUM PERCENTAGE			41.8%		Good
COLOR	Water White				
ODOR	None				
TURBIDITY	Clear				
CONDUCTIVITY, MHOS/CM³X10⁵@25°C.			- 145.3		

REMARKS:

As indicated above this sample would be classified as excellent for irrigation use.

ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS. AUTHORIZATION FOR PUBLICATION OF OUR REPORTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING THEM IS RESERVED PENDING OUR WRITTEN APPROVAL AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES.

KERN PTG. CO.

TEL. 8-8567

P. O. BOX 867

HORNKOHL LABORATORIES

CHEMICAL AND TESTING ENGINEERS

714 TRUXTUN AVENUE

BAKERSFIELD, CALIFORNIA

October 8, 1954

Laboratory No. ~~79499~~ 79500

Sample Water

Marked 9/25/54: Well #14

Received Sept. 29, 1954

Submitted by Mr. A. F. Peterson
Bakersfield, Calif.

* * * * * * * * * * *

IRRIGATION WATER ANALYSIS

CONSTITUENTS			PARTS PER MILLION	GRAINS PER GALLON	IRRIGATION WATER CLASSIFICATION
CARBONATES	(ALKALI)	(CO_3)	3.6	0.21	Fair-Good
BICARBONATES		(HCO_3)	170.8 2.78	9.99	Good
CHLORIDES	(SALT)	(Cl)	112.1	6.56	Good
SULPHATES		(SO_4)	523.9	30.64	Good
SULPHIDES		(S)	0.0	0.00	Good
NITRATES		(NO_3)	7.0	0.41	Good
CALCIUM	(LIME)	(CA)	200.0	11.70	Good
MAGNESIUM		(MG)	18.5	1.08	Good
SODIUM		(NA)	125.8	7.36	Good
BORON		(B)	0.05	-	Good
IRON		(FE)	0.1	-	Good
HARDNESS AS $CaCO_3$			576.0	33.68	Good
TOTAL SOLIDS @ 105°C			1076.3	62.94	
TOTAL SOLIDS @ RED HEAT			1010.7	59.10	
pH (HYDROGEN ION CONCENTRATION)			- 8.4		Fair-Good
SODIUM PERCENTAGE			32.2%		Good
COLOR	Water White				
ODOR	None				
TURBIDITY	Clear				
CONDUCTIVITY, MHOS/CM³X10⁵@25°C.			-- 165.1		

	Theoretical Analysis	
Calcium Carbonate	6.0	0.35
Calcium Bicarbonate	226.9	13.27
Calcium Sulphate	481.9	28.18
Magnesium Sulphate	91.5	5.35
Sodium Sulphate	164.1	9.60
Sodium Chloride	184.7	10.80

REMARKS: As indicated by the last column above, this sample would be classified as excellent for irrigation use.

Respectfully submitted,

HORNKOHL LABORATORIES

Frank Hornkohl

ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS. AUTHORIZATION FOR PUBLICATION OF OUR REPORTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING THEM IS RESERVED PENDING OUR WRITTEN APPROVAL AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES.

KERN PTG. CO.

ARTHUR L. BABCOCK
WILLARD G. BABCOCK
SHERMAN G. BABCOCK

CERTIFICATE OF ANALYSIS

ESTABLISHED 1906

EDWARD S. BABCOCK & SONS

P. O. BOX 432
RIVERSIDE, CALIFORNIA

AGRICULTURAL
APPRAISALS
SUPERVISION
MANAGEMENT
LABORATORIES
3445 FIRST STREET

TO DiGiorgio Fruit Corp.,
Box "A"
Borrego Springs, Calif.

March21, 1955

SAMPLE MARKED Water
Well #14

LABORATORY NO. 550317-C

Electrical Conductance ($EC \times 10^6$) determined at 25° Centigrade.

Electrical Conductance - - - - - - 2941

Sodium Percent (Na%) - - - - - - - 34.4%

	Parts per Million:	Milligrams Equivalent:
Calcium (Ca)	355	17.75
Magnesium (Mg)	36	3.00
Sodium (Na)	250	10.87
Carbonate (CO_3)	None	----
Bicarbonate (HCO_3)	140	2.30
Sulfate (SO_4)	1167	24.31
Chloride (Cl)	128	3.60
Nitrate (NO_3)	63	1.02
Boron (B)	.08	

EDWARD S. BABCOCK & SONS

Sherman G. Babcock

TEL. 8-8567 P. O. BOX 867

HORNKOHL LABORATORIES

CHEMICAL AND TESTING ENGINEERS

714 TRUXTUN AVENUE

BAKERSFIELD, CALIFORNIA December 10, 1954

Laboratory No. 81661

Sample Water *Marked* Well #F 14

Received December 3, 1954

Submitted by Borrego Farms, Attn: Mr. Hasel
Borrego Springs,
California

* * * * * * * * * * *

IRRIGATION WATER ANALYSIS

CONSTITUENTS			PARTS PER MILLION	GRAINS PER GALLON	IRRIGATION WATER CLASSIFICATION
CARBONATES	(ALKALI)	(CO_3)	0.0	0.00	Good
BICARBONATES		(HCO_3)	153.7	8.99	Good
CHLORIDES	(SALT)	(C1)	163.2	9.54	Good
SULPHATES		(SO_4)	864.0	50.53	Good
SULPHIDES		(S)	0.0	0.00	Good
NITRATES		(NO_3)	31.2	---	Good
CALCIUM	(LIME)	(CA)	352.8	20.63	Good
MAGNESIUM		(MG)	44.4	2.60	Good
SODIUM		(NA)	88.3	5.16	Good
BORON		(B)	0.15	---	Good
IRON		(FE)	.1	---	Good
HARDNESS AS $CaCO_3$			1064.0	62.22	Good
TOTAL SOLIDS @ 105°C			1620.8	94.78	
TOTAL SOLIDS @ RED HEAT			1564.1	91.46	
pH (HYDROGEN ION CONCENTRATION)			7.4		Good
SODIUM PERCENTAGE			15.3 %		
COLOR	Water White				
ODOR	None				
TURBIDITY	Clear				
CONDUCTIVITY, MHOS/CM^3X10^5@25°C.			265.8		

THEORETICAL ANALYSIS

Calcium Bicarbonate	153.7	8.99
Calcium Sulfate	1029.2	60.18
Magnesium Sulfate	173.3	10.13
Magnesium Chloride	36.2	2.12
Sodium Chloride	224.5	13.13

REMARKS; The above sample would be classified as good for irrigation use.

Respectfully submitted,

HORNKOHL LABORATORIES

Frank Hornkohl

by

ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS. AUTHORIZATION FOR PUBLICATION OF OUR REPORTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING THEM IS RESERVED PENDING OUR WRITTEN APPROVAL AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES.

KERN PTG. CO.

EDWARD S. BABCOCK
ARTHUR L. BABCOCK
WILLARD G. BABCOCK
SHERMAN G. BABCOCK

CERTIFICATE OF ANALYSIS

ESTABLISHED 1906

EDWARD S. BABCOCK & SONS
P. O. BOX 432
RIVERSIDE, CALIFORNIA

AGRICULTURAL
APPRAISALS
SUPERVISION
MANAGEMENT
CHEMICAL
LABORATORIES
3445 FIRST STREET

TO DiGiorgio Fruit Corp.
P. O. Box A
Borrego Springs, Calif.

December 13, 1954

LABORATORY NO. 541202-F

SAMPLE MARKED Water, Well #F 14

Electrical Conductance ($EC \times 10^6$) determined at 25° Centigrade.

Electrical Conductance - - - - - - 2955

Sodium Percent (Na%) - - - - - - - 32.5%

	Parts per Million:	Milligrams Equivalent:
Calcium (Ca)	351	17.55
Magnesium (Mg)	39	3.25
Sodium (Na)	230	10.00
Carbonate (CO_3)	None	----
Bicarbonate (HCO_3)	140	2.30
Sulfate (SO_4)	1105	23.03
Chloride (Cl)	160	4.50
Nitrate (NO_3)	60	.97
Boron (B)	.09	

EDWARD S. BABCOCK & SONS

Sherman G. Babcock

ARTHUR L. BABCOCK
WILLARD G. BABCOCK
SHERMAN G. BABCOCK

CERTIFICATE OF ANALYSIS

ESTABLISHED 1906

EDWARD S. BABCOCK & SONS

P. O. BOX 432
RIVERSIDE, CALIFORNIA

AGRICULTURAL
APPRAISALS
SUPERVISION
MANAGEMENT
LABORATORIES
3445 FIRST STREET

TO DiGiorgio Fruit Corporation
P. O. Box A
Borrego Springs, California

SAMPLE MARKED Water #14

September 2, 1955

LABORATORY NO. 550818-L

Electrical Conductance ($ECx10^6$) determined at 25° Centigrade.

Electrical Conductance - - - - - - 1377

Sodium Percent (Na%) - - - - - - - 39.2%

	Parts per Million:	Milligrams Equivalent:
Calcium (Ca)	142	7.10
Magnesium (Mg)	12	1.00
Sodium (Na)	120	5.22
Carbonate (CO_3)	6	.20
Bicarbonate (HCO_3)	113	1.85
Sulfate (SO_4)	394	8.21
Chloride (Cl)	67	1.90
Nitrate (NO_3)	79	1.27
Boron (B)	.09	

EDWARD S. BABCOCK & SONS

Sherman G. Babcock

WILLARD G. BABCOCK
ARTHUR L. BABCOCK
SHERMAN G. BABCOCK

CERTIFICATE OF ANALYSIS

ESTABLISHED 1906

EDWARD S. BABCOCK & SONS

P. O. BOX 432
RIVERSIDE, CALIFORNIA

AGRICULTURAL
APPRAISALS
SUPERVISION
MANAGEMENT

LABORATORIES
3445 FIRST ST.

TO Borrego Farms
P. O. Box A
Borrego Springs
California

SAMPLE MARKED Water
Well #14

March 29, 1956

Laboratory No. 560327-C

Cations	Parts per million	Milligram equivalents per liter	Anions	Parts per million	Milligram equivalent per liter
Calcium (Ca)	400	20.00	Carbonate (CO_3)	None	----
Magnesium (Mg)	43	3.58	Bicarbonate (HCO_3)	143	2.35
Sodium (Na)	265	11.52	Sulfate (SO_4)	1258	26.21
Potassium (K)			Chloride (Cl)	165	4.65
			Nitrate (NO_3)	110	1.77

			Parts per million
Conductivity, $EC \times 10^6$ @ 25° C.	3302	Total Hardness calculated as $CaCO_3$	1179
Percent Sodium	30.5	Fluoride (F)	
Hydrogen-ion activity (pH)		Boron (B)	.28

EDWARD S. BABCOCK & SONS

Sherman G. Babcock

WILLARD G. BABCOCK
ARTHUR L. BABCOCK
SHERMAN G. BABCOCK

CERTIFICATE OF ANALYSIS

ESTABLISHED 1906

EDWARD S. BABCOCK & SONS

P. O. BOX 432
RIVERSIDE, CALIFORNIA

AGRICULTURAL
APPRAISALS
SUPERVISION
MANAGEMENT

LABORATORIES
3445 FIRST ST.

TO DiGiorgio Fruit Corp.
Box A
Borrego Springs, Calif.

SAMPLE MARKED Well 14

October 3, 1956

Laboratory No. 560921-L

Cations	Parts per million	Milligram equivalents per liter	Anions	Parts per million	Milligram equivalent per liter
Calcium (Ca)	124	6.20	Carbonate (CO_3)	none	----
Magnesium (Mg)	23	1.92	Bicarbonate (HCO_3)	122	2.00
Sodium (Na)	144	6.26	Sulfate (SO_4)	450	9.38
Potassium (K)			Chloride (Cl)	92	2.60
			Nitrate (NO_3)	35	.56

			Parts per million
Conductivity, $EC \times 10^6$ @ 25° C.	1423	Total Hardness calculated as $CaCO_3$	406
Percent Sodium	43.5	Fluoride (F)	
Hydrogen-ion activity (pH)		Boron (B)	.2

EDWARD S. BABCOCK & SONS

Sherman G. Babcock

HORNKOHL LABORATORIES

Telephone 8-8567

ANALYSES OF OIL, WATERS, SOILS, OIL CORES

P. O. Box 1673

714 TRUXTUN AVENUE
BAKERSFIELD, CALIFORNIA

May 12, 1953

Laboratory No. 71034-35

Sample Water

Marked BORREGO as shown below

Received May 8, 1953

Submitted by Di Giorgio Farms
Di Giorgio, California

* * * * * * * *

PARTIAL IRRIGATION WATER ANALYSES

WELL #14

Constituents		Parts per Million	Grains per Gallon	Water Classification
Carbonates	CO_3	0.0	0.00	Good
Bicarbonates	HCO_3	164.7	9.63	Good
Chlorides	Cl	99.3	5.81	Good
Sulfates	SO_4	405.7	23.73	Good
Sulfides	S	0.0	0.00	Good
Boron	B	0.10		Good
Hardness as $CaCO_3$		475.0	27.78	Good
pH — 7.6				Good
Sodium Percentage — 31.9%				Good

Color: Water White
Odor: None
Turbidity: Clear
Conductivity: (Mhos/cm^3 x 10^5 @25°C.) — 140.6

WELL #15

Carbonates	CO_3	0.0	0.00	Good
Bicarbonates	HCO_3	161.0	9.42	Good
Chlorides	Cl	163.5	9.56	Good
Sulfates	SO_4	615.9	36.02	Good
Sulfides	S	0.0	0.00	Good
Boron	B	0.10		Good
Hardness as $CaCO_3$		736.0	42.04	Good
pH — 7.5				Good
Sodium Percentage — 26.6%				

Color: Water White
Odor: None
Turbidity: Clear
Conductivity: (Mhos/cm^3 x 10^5 @25°C.) — 207.6

REMARKS: As noted by the classification above, these samples would both be listed as excellent for irrigation use.

ephone
567

HORNKOHL LABORATORIES

P.O. Box 1673

Analyses of Oil, Waters, Soils, Oil Cores

714 Truxtun Avenue
Bakersfield, California

May 10, 1952

COPY

oratory No. 64821
nple Water
eived April 28, 1952
mitted by Di Giorgio Farms
Di Giorgio, Calif.

Marked Well #14

* * * * * * * *

COMPLETE IRRIGATION WATER ANALYSIS

Constituents		Parts per Million	Grains per Gallon	Water Classification
Carbonates	CO_3	0.0	0.00	Good
Bicarbonates	HCO_3	176.3	10.31	Good
Chlorides	Cl	95.1	5.56	Good
Sulfates	SO_4	273.1	15.97	Good
Sulfides	S	0.0	0.00	Good
Calcium	Ca	178.8	10.45	Good
Magnesium	Mg	3.7	0.22	Good
Sodium	Na	46.5	2.72	Good
Boron	B	0.10		Good
Nitrates	NO_3	21.0		
Iron	Fe	0.1		
Hardness as $CaCO_3$		462.0	27.02	Good
pH -- 7.7				Good
Sodium Percentage -- 17.9%				Good
Color:	Water White			
Odor:	None			
Turbidity:	Clear			
Conductivity: $Kx10^5$ @ 25°C. --		176.5		
Total Solids @ 105°C.		685.2	40.07	
Total Solids @ Red Heat		619.2	36.21	

Theoretical Analysis

Calcium Bicabonate	234.2	13.69
Calcium Sulfate	387.3	22.65
Calcium Chloride	19.9	1.15
Magnesium Chloride	14.2	0.83
Sodium Chloride	118.1	6.91

REMARKS: As noted by the last column above, this sample would be classified as excellent for irrigation use.